DDFA Midyear Review

Large-Scale Demonstration and Deployment of Hot Cells at the West Valley Demonstration Project

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Purpose

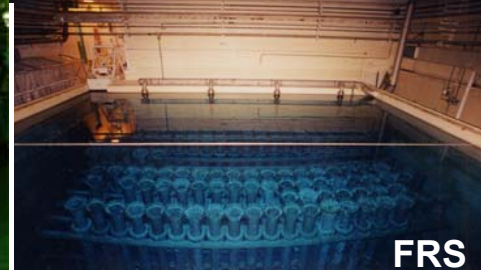
- To select, demonstrate and deploy mature technologies that can measurably reduce high risk and high cost baselines on D&D of hot cells within the DOE complex.

Goals

- Identify enabling technologies
- Identify technologies that can:
  - Reduce implementation costs
  - Shorten schedules
  - Enhance safety
  - Decrease mortgage costs

Background

PMC shield window replacement



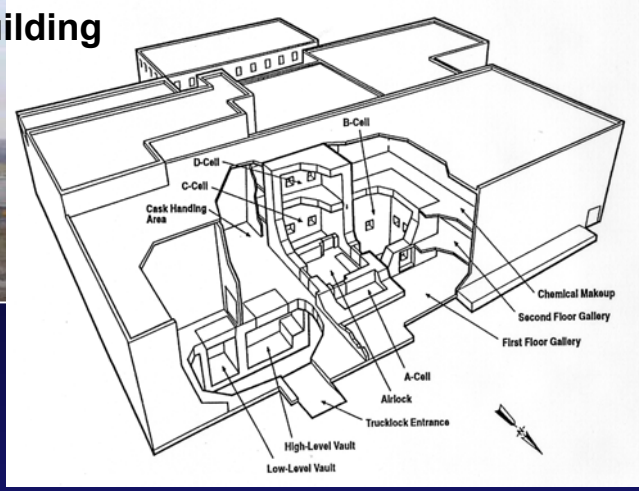
- West Valley Demonstration Project in West Valley, New York
  - Nuclear Fuel Reprocessing Facility
    - Process Mechanical Cell (270 R/hr) – fuel rods chopped into 2 inch pieces
    - General Purpose Cell (650 R/hr) – chopped fuel and empty fuel hulls collected
    - Extraction Cells 1 and 2 (6 R/hr) – dissolved fuel is separated into Pu and U
    - Fuel Receiving and Storage area (2 R/hr) – pool for storing spent fuel and dry cell for water treatment system

Background

- Battelle Columbus Laboratories Decommissioning Project in West Jefferson, Ohio
  - Nuclear research on reactor studies and fuel burnup
    - Hotcell facility containing 5 hotcells (600 R/hr)
    - Packaging remote handled TRU waste
    - Cleaned and removed 150,000 gallons of spent fuel pool water

Background

324 Building



- Hanford in Richland, Washington
  - 324 Building
    - Houses radiochemical and radiometallurgical hot cells (A-D) and shielded material facility hot cells
    - B Cell - approximately 70M curies and dose rates as high as 2000 R/hr
    - Accelerated closure schedule
  - 327 Building
    - Shielded laboratories/hot cells (9) for examination of irradiated fuels and materials
    - Accelerated closure schedule

327 Building

Scope of Project

- Decontaminating equipment and surfaces
- Conducting in-situ characterization
- Handling and retrieving equipment and materials
- Size reducing equipment and materials
- Viewing in-cell areas
- Applying fixatives to contaminated surfaces
- Dismantling structures

Strippable coating was used in the Process Mechanical Cell Crane Room to prepare for future work.

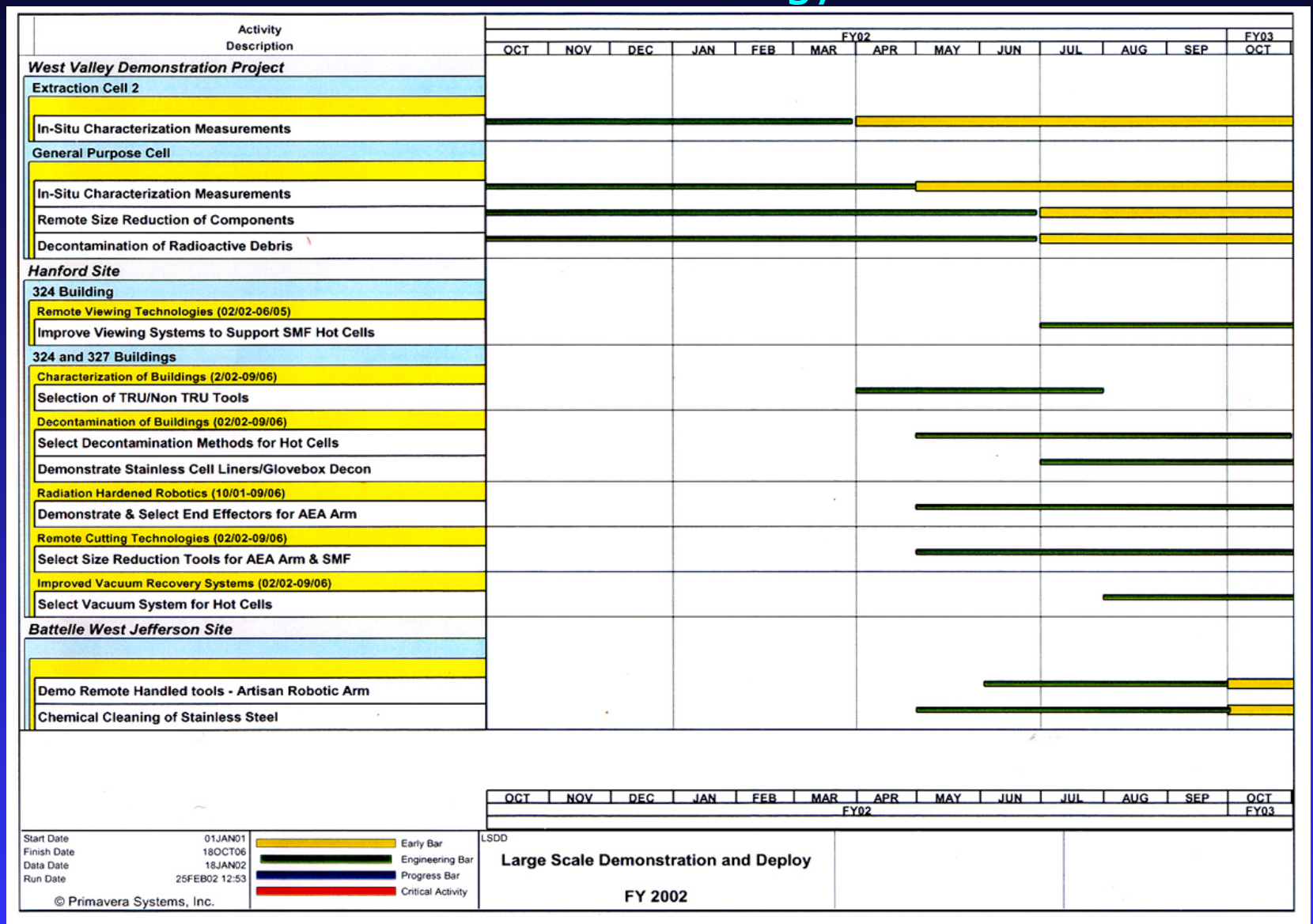
Demonstration Selection Process

- Step 1: Develop screening criteria and selection process
- Step 2: Identify interested vendors capable of providing qualified technologies for demonstration
- Step 3: Request proposal for cost information from list of selected vendors
- Step 4: Award subcontract to selected vendors

Milestones	Baseline Date	Actual Date
Hold ICT Kickoff Meeting	Oct. 30, 2001	Oct. 10, 2001
Establish Technology Screening Forms & Criteria	Nov. 30, 2001	Nov. 12, 2001
Establish Web Page	Jan. 31, 2002	Jan. 25, 2002
Posted FedBizOpps Announcement and Sent Out RFI to Vendors	Jan. 23, 2002	Jan. 29, 2002

Integrated Schedule

Site Activities and Related Technology Needs Schedule



Demonstration Projections for FY 2002

	WVDP			Hanford			West Jefferson		
	# of Demos	Cost per Demo	Total Cost	# of Demos	Cost per Demo	Total Cost	# of Demos	Cost per Demo	Total Cost
Decontamination							1	$100K	$100K
Characterization	1	$200K	$200K						
Remote Handling and Retrieval							1	$200K	$200K
Size Reduction	1	$50K	$50K						
Remote Viewing	1	$200K	$200K	1	$100K	$100K			
Application of Fixatives									
Dismantlement									
TOTAL	3		$450K	1		$100K	2		$300K

FY02 TOTALS = $850K (Demonstrations) + $150K (Integrating Contractor Team) + $300K (Project Admin.) = $1.3M

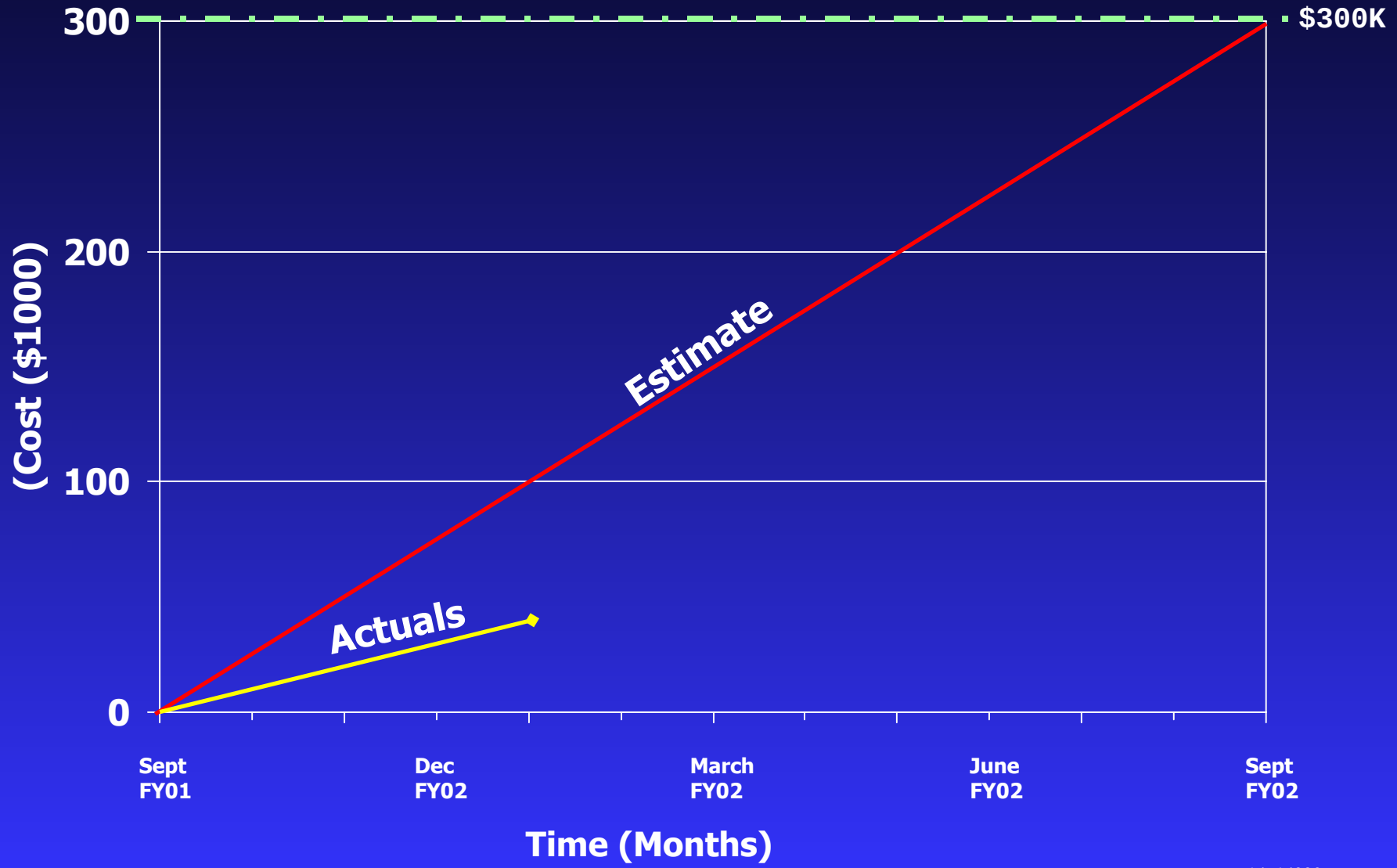
Integrated Schedule

Sequence of Key Steps to Identify and Perform FY02 Demonstration

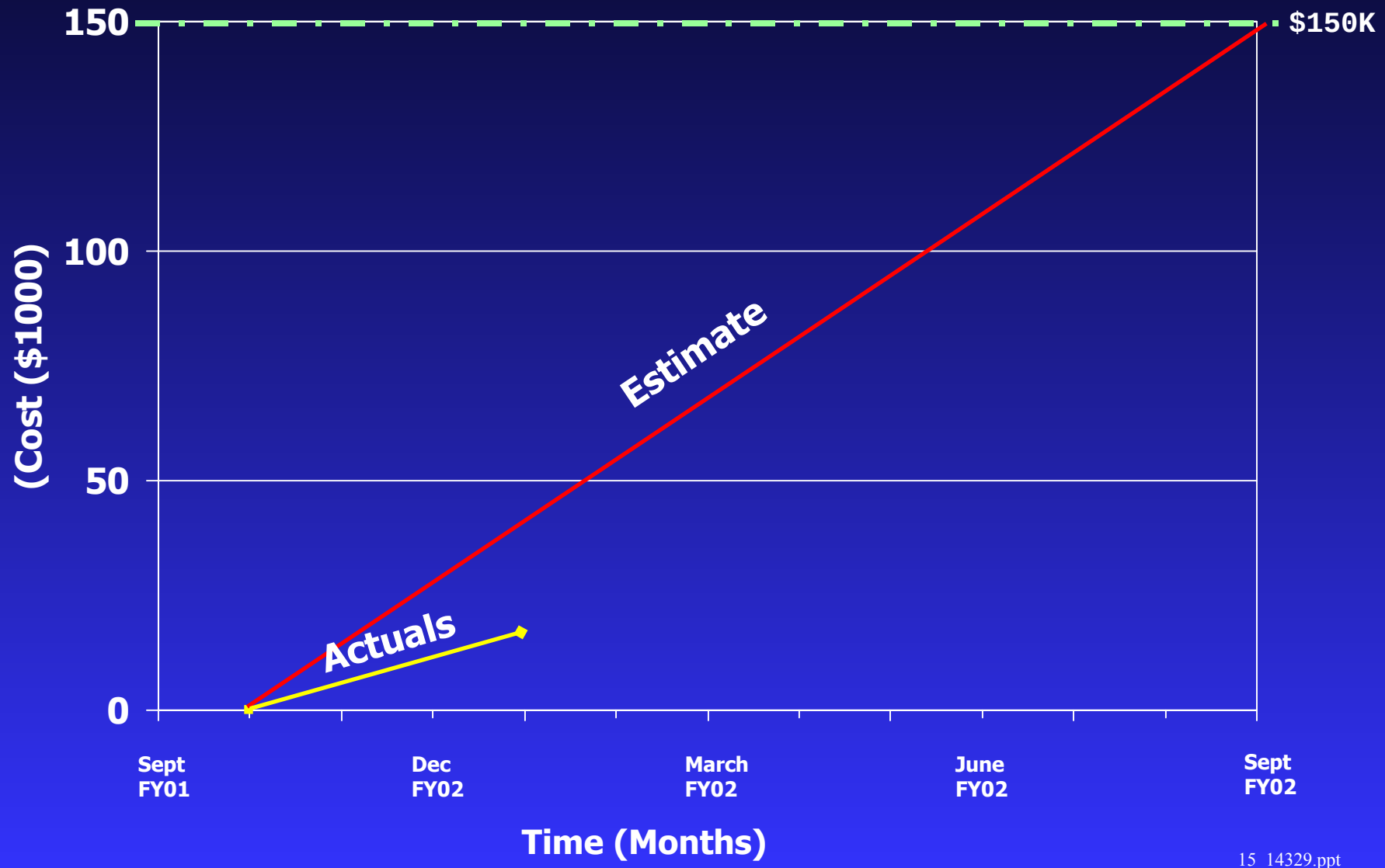
Cost

- Available Funding to Date $1.3M
- Performance Through January 2002:
  - ✓ Budgeted Cost of Work Scheduled $91K
  - ✓ Budgeted Cost of Work Performed $93K
  - ✓ Actual Cost of Work Performed $63K
- Project Outyear Funding $3.0M
- Expected Spending in FY 2002 $1.3M

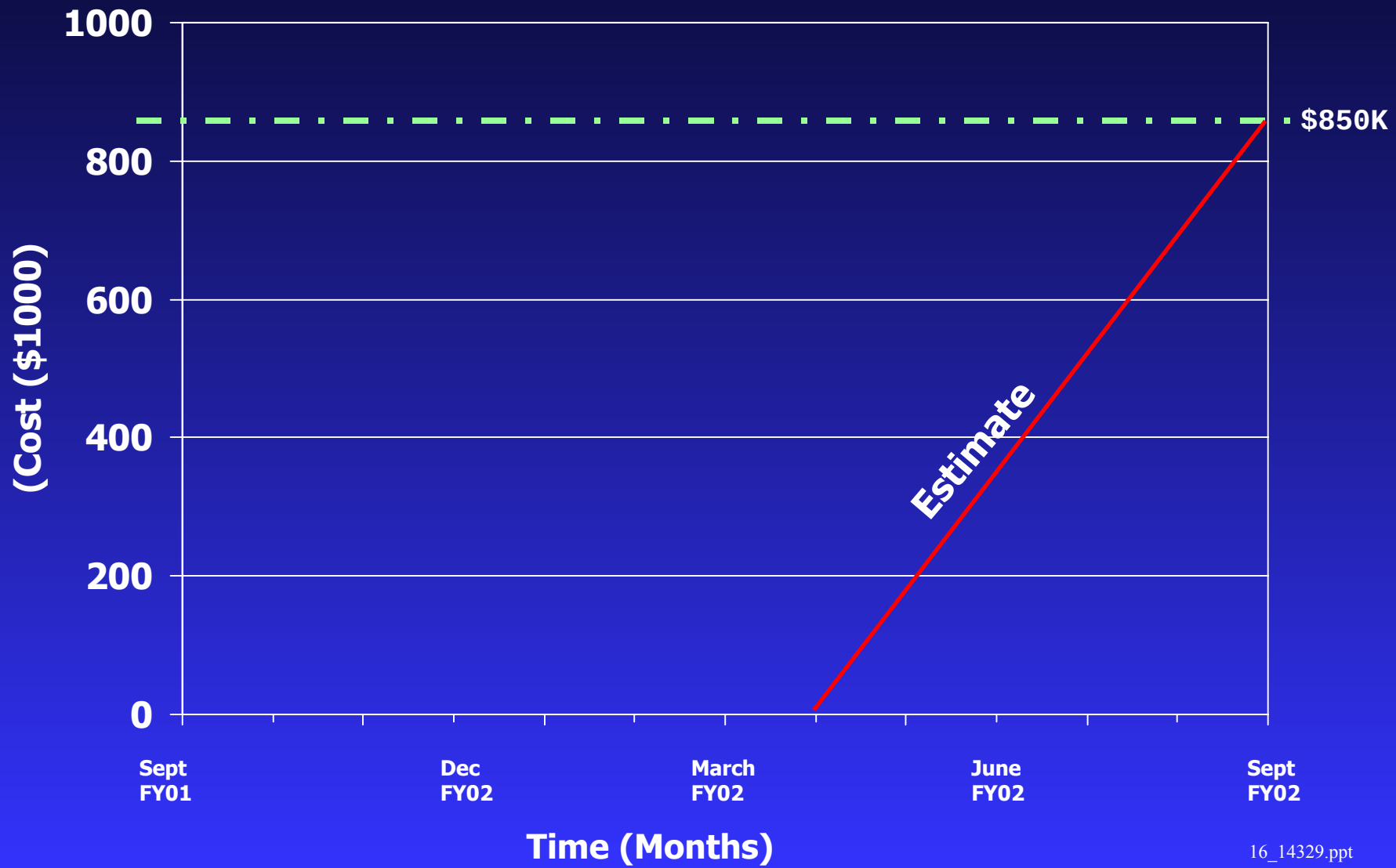
Actual Vs Estimated Costs Through FY 2002 for Project Management and Administration



Actual Vs Estimated Costs Through FY2002 for Integrating Contractor Teams



Actual Vs Estimated Costs Through FY2002 for Demonstrations



Planned Activities

- Obtain Long-List of Vendors Interested
- Perform Screening and Selection Evaluation
- Determine Short-List of Vendors
- Request proposals from Short-List Vendors
- Identify Vendors to Perform Demonstrations
- Develop Test Plan, Work Documents, and TSDS

New Technologies vs. Baseline (Expected Benefit)

- Cost comparisons may be difficult due to lack of baseline metrics
- Expect demonstrations biased towards enabling technologies
- Contamination of vendor equipment
- Cost per demonstration high due to remote, high risk applications

Closing

- First time for LSDDP
- Strong program
- Poised and ready